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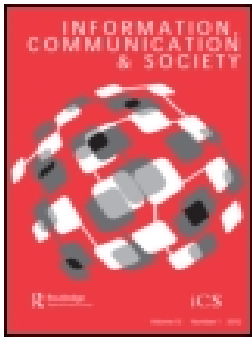
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Revolution postponed? Tracing the development and limitations of open content filmmaking

Evi Giannatou^a, Gian Marco Campagnolo^a, Michael Franklin^b, James K Stewart^a and Robin Williams^a

^aScience, Technology & Innovation Studies, School of Social and Political Science, The University of Edinburgh, Edinburgh, Scotland; ^bInstitute for Capitalising on Creativity, School of Management, The University of St Andrews, St Andrews, UK

ABSTRACT

Networked information technologies have brought about extensive changes in the production and distribution of creative cultural work. Inspired by the widespread success of Free-Libre/Open Source Software (FLOSS), many proponents of open access advocate reconceptualisation of existing legal protection frameworks in creative works. This paper traces the attempted appropriation of Creative Commons (CC) licences by filmmakers and the consequent formation of an Open Content Filmmaking (OCF) movement. OCF proponents articulated notions of technology-enabled transformation in content creation and distribution, similar to those that inspire the visions of FLOSS and CC advocates. It examines how these creators attempted to address the relevance of openness to their own activities and develop practical open models for filmmaking. Difficulties experienced in establishing viable livelihoods with OCF (as FLOSS developers had done), created tensions between those with a pragmatic or more ideological orientation. The initial vision of a consistent OCF movement, enabled by CC, thus became fragmented. In contrast to FLOSS, where many actors were able to find ways to develop sustainable careers within the industry while contributing to Open Source Software, such generic strategies have not readily emerged for OCF. Drawing insights from Sørensen's (1996) Social Learning framework (*Learning technology, constructing culture. Sociotechnical change as social learning*: University of Trondheim, STS working paper 18/96) in this paper we untangle the elaborate but often messy strategies deployed by Open Content Filmmakers (OCFs) and trace the multiple and often partial ways they have worked out to utilise CC elements and tools in producing, monetising and distributing their films.

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Digital media; cultural creation/filmmaking; copyright; open content/open source (FLOSS); science and technology studies; social learning perspective

1. Introduction

The success of the Free-Libre/Open Source Software (FLOSS) movement has inspired the translation and application of its principles into many diverse areas of cultural production.

CONTACT Robin Williams  R.Williams@ed.ac.uk  Science, Technology & Innovation Studies, School of Social and Political Science, The University of Edinburgh, Old Surgeon's Hall, Edinburgh EH1 1LZ, Scotland

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The FLOSS paradigm of content creation is based on a reconceptualisation of Intellectual Property (IP) rights and how to exercise them. As Weber explains: ‘Open source is an experiment in social organisation for production around a distinctive notion of property ... Property in open source is configured fundamentally around the right to distribute, not the right to exclude’ (2004, p. 16). The efforts to appropriate FLOSS practices outside the field of software, in particular with the development of Creative Commons (CC) licences, based on the ingenious reconfiguration of copyright rules brought about by FLOSS, were regarded by many as having introduced a new paradigm for creative production and distribution.

The viability of FLOSS is now widely demonstrated – with IT corporations allowing their technical staff to collaborate in jointly developing key operating systems like Linux or Android, thereby sharing cost and risks (NESTA, 2015). However, attempts to develop open business models in various areas of creative production have met with uneven degrees of success. As Kreiss, Finn, and Turner (2011) point out, the impact of such models and practices is much more limited than is emphasised by new media evangelists. The extension of open and collaborative practices from software to different types of cultural creation such as music, computer games, literature and film remains a fairly recent and unexplored phenomenon. There was considerable interest in their contribution to the development of new open business models for creators in the information economy. Thus *Openness and New Business Models* was one of the seven research themes of the RCUK Centre for Copyright and New Business Models in the Creative Economy (CREATE) that sponsored this study and other research that sought to ‘explore open business models which aim to replicate the success of the Open Source Software model, with publishing, design, music and film all considered’. Cassarino and Geuna (2007) specifically address the applicability of FLOSS to filmmaking – detecting interesting similarities as well as differences. This paper aims to contribute to the examination of such modes of content creation by tracing the development of the open content filmmaking (OCF) movement.

OCF can be seen as a branch of a larger, more general movement that mobilises diverse actors and communities, supported by platforms such as the CC organisation and Open Culture, and is motivated by a concern that the aggressive reassertion of copyright in the digital ecosystem would significantly diminish access to cultural resources. In response to these trends, Free/Open Culture advocates seek change through the re-configuration of cultural production and copyright law. Like CC, Open Culture forms a wide platform that brings together different types of practitioners with diverse motivations who have a common interest in improving access to cultural resources, thus mobilising a dynamic social movement with wide appeal, though perhaps also with the added peril of ideological fuzziness (Elkin-Koren, 2005), since the actors involved do not share the same political position or level of ideological motivation. Having as a broad goal the creation of a public domain of works that can be accessed and used without the need to obtain permission, the Open Culture movement seeks to translate the ideas that underpin FLOSS principles to a variety of domains of cultural practice.

In this study, we focus closely on projects that have adopted CC licences and examine how filmmakers experiment with alternative configurations for production and distribution, conceived as a way to harness the maximum potential of digital technologies, and how they consequently develop a variety of novel and innovative strategies around their open content licenced films.

As we see below, open content filmmakers (OCFs) hold diverse and even conflicting approaches to what an open film is and how openness is relevant to them. Collaborative production, crowdfunding techniques and digital social distribution can be combined with reserving commercial rights, forbidding derivative works and collaborating with commercial distributors and intermediaries from the established film industry. In contrast to software, where standards and governance have emerged as to what rules¹ projects must adhere to in order to qualify for the name of ‘free software’, there continues to be substantial ambiguity regarding which principles a film must follow to be considered part of the OCF movement. In this regard, the range of options that CC offer can more readily be compared to the whole spectrum of licences provided by FLOSS, than to the considerably more restrictive range of free licences. Thus not all CC licences are free licences. This can be the cause of many tensions (as we will see in more detail below in our discussion of *Limitations and Struggles in OCF*). However, they still represent a shift to a more flexible approach to exercising IP rights in the digital environment. Consequently, for many creators, the use of a CC licence is regarded as sufficient qualification for a work to be considered open and they claim that there is no necessity to come up with a strict set of rules for what would constitute an *open cultural product*.

In contrast, other creators and copyright activists argue that a more strict definition of openness is essential for the term to have true significance, otherwise they warn it will just end up being another superficial marketing label. They further suggest that certain self-proclaimed OCF projects may not, in fact, contribute to the building of a commons at all but instead may actually play a part in its fragmentation. The many different licence variations available are often not compatible, resulting in the proliferation of legal licences with no common ground to be built upon. This is especially the case when films include in their licencing strategy the Non-Commercial (NC) or the Non-Derivative (ND) clause².

It appears therefore that the ambitious plans and early expectations of OCFs and CC advocates for an OCF movement that could potentially compete even with the mainstream film industry has not quite come into fruition. Nor has Lawrence Lessig’s proclamation during the first Nordic CC Film Festival in 2013 that it: ‘will radically change the ways we produce and consume films’. On the other hand, as this paper shows, CC licences and their application in independent film projects can teach filmmakers important lessons about the legal aspects of their craft and how such legal aspects are inextricably linked with a project’s socio-technical context. Furthermore, although the expectation of revolutionary change appears unfulfilled, our subsequent research, to appear in a later paper (Campagnolo et al., 2018), demonstrates that a subtler but no less deep transformation is indeed taking place through the integration of OCF elements into the mainstream film industry practices.

After reviewing the relevant literature and elucidating the framework and methodology used for this research, this paper discusses some of the vital characteristics and lessons learned from making open content films. Here we witness how filmmakers domesticate the licences through diverse processes of social learning. Our analysis closes with an examination of the limitations and struggles in OCF. In the final section we revisit the main points of our analysis, draw links with our theoretical framework and come to some conclusions with regards to the future of OCF.

2. Literature review

Scholars have written extensively on the transformative power of peer and open production and distribution models (Benkler, 2006; Benkler, 2016; Rheingold, 2002; Shirky, 2008), their participatory nature (Jenkins, 2008), democratising aspects (Von Hippel, 2005), unique innovation potentials (Leadbeater, 2008) and economic robustness (Aigrain, 2012; Anderson, 2006; Howe, 2009; Tapscott & Williams, 2006) and thus their potential to offer a viable alternative to our current mode of capitalism, based on collaboration (Kostakis & Bauwens, 2014). Many assert that digital creation and distribution technologies and IT-mediated peer production represent opportunities to explore the principles of openness, collaboration, inclusivity and decentralisation, conceptually framed as radically different from the hierarchical, bureaucratic and centralised organisational structures of the past (Benkler, 2016). Commons-based peer production is already a vital part of our information economy, placing collaboration and sharing of knowledge and information at the core of value creation (Arvidsson et al., 2017). Scholars such as Ostrom (2008) challenge the notion that communities are not capable of avoiding the ‘tragedy of the commons’, by demonstrating how, provided certain conditions are met, groups can self-regulate in order to preserve resources that are held in common. Bauwens (2005) also notes a significant difference between the older types of commons that are localised and have scarce resources to share, and the new, information commons with its immaterial characteristics operating within a context of abundance. This contrast between scarcity and abundance has been applied to the dichotomy between the OCF regime of film production and distribution and commercial filmmaking. OCFs tend to embrace the characteristics of digital technology and adopt practices appropriate for commons-based regimes with abundant resources; while commercial filmmaking, even in the context of digital disruption, operates to maintain artificial scarcity against a backdrop of competition.

The CC project, launched in 2001, was inspired by similar ideas of an information commons and with the clear goal of extending the logic of the GPL licence³ beyond software to copyrights related to culture and ideas (Jordan, 2008). CC aims to provide a ‘legal and technical infrastructure’⁴ that cover various types of copyright-protected material such as: blogs, websites, educational material, photographs and music as well as film. It is in these areas that copyright infringement is encountered on a regular basis through everyday practices of new media users and very often without the realisation that their actions are infringing on someone else’s copyright (Tehrani, 2007). The CC project also echoes the ideas of the FLOSS developers when they argue that the case for openness is not only moral, but also practical and economically rewarding (Raymond, 1999). Open and collaborative systems encourage innovation, work more efficiently and produce better results than closed, controlled and proprietary systems of development and innovation (Coates & Fitzgerald, 2008). Consequently, open systems will stimulate the economy. It is also argued that creativity and innovation are best served by information and culture that is as widely available as possible, in order to guarantee that creators and innovators remain free from control by corporate rights holders (Lessig, 2004).

On the other hand, re-arrangements in the creative industries towards more horizontal, networked models of cultural production, may entail a higher degree of autonomy and flexibility for creators but they also require individuals to work long hours and hold multiple positions within both formal organisations and in more informal, networked groups

(McRobbie, 2002). Precarious working arrangements within the creative industries, declining public funding and increased competition make creators turn towards the online financing market, where again they need to rely on ad hoc means of funding and are only able to recuperate their own investment in the long term (Sørensen, 2012). Our research indeed reveals the precarity of OCFs, traced through a complex landscape where the creation process as well as licence adoption and domestication are far from being smooth and predictable processes, leading often to tensions and conflicts about the application and usefulness of CC licences in achieving the filmmakers' practical or ideological goals.

3. Framework and methodology

This paper applies a theoretical framework and methodologies from Science and Technology Studies to examine how digital media, cultural creation and copyright options come together, influence each other and develop simultaneously through their interconnections. This study seeks to overcome widespread asymmetrical treatments of this topic that result from the focus of much legal scholarship on formal rules and from the close linkage of many scholars in the field to Open Source/Open Content movements. Legal scholarship is often criticised for being mostly theoretical, abstract, prescriptive or normative, as it is mainly preoccupied with the 'law on the books' and doctrinal approaches to the application of copyright law and its alternatives. Authors like Cotterrell (1995), Coombe (2004) and Gallagher (2007) have stressed the need for a turn towards qualitative Socio-Legal Studies that would pay attention to the lived experiences of the actors involved. On the other hand, many Media Studies and Socio-Legal scholars (Benkler, 2006; Leadbeater, 2008; Shirky, 2008) have tended to embrace the transformative powers of digital technologies that are seen to bring forth a new era for cultural production and creative practices. Such overtly enthusiastic, if not utopian visions of the affordances of networked technologies and their 'transformative effects' on society, cultural production and creative practices are often biased towards the new capabilities that are assumed to unproblematically open up through the use of digital technology.

This paper has applied qualitative methods through detailed ethnographic study that offer rich descriptions of the complex driving forces behind this contested landscape and the differing context and rationales of the actors involved. Our framework is informed by the Social Shaping of Technology perspective (MacKenzie & Wajcman, 1985; Williams & Edge, 1996) that critically interrogates the linear conceptions of innovation that underpin compelling modernist visions of new technology driving social transformation. In particular, we turn to Sørensen's (1996) concept of Social Learning, an approach that places in the forefront of analysis the choices, complexities, uncertainties and contingencies involved in the development of new technologies and their societal embedding. It highlights the importance of unpacking multiple links between technical change and change in social practices and institutions, including legal innovation, while simultaneously tracing the precarious and contested processes of learning by individuals and groups that are integral to the development, implementation and domestication of innovation (Williams, Stewart, & Slack, 2005). Sørensen (1996, p. 6) defines social learning as 'a combined act of discovery and analysis, of understanding and meaning, and of tinkering and the development of routines'. This perspective also warns us against taking for granted the apparent affordances and limitations of particular innovative ideas or products, as these

need to be discovered and established through their practical application in the users' day-to-day practices in everyday settings ('learning by doing').

CC licences as a legal innovation were conceived as a means to exemplify and assist an alternative and innovative model of organising cultural production, the dissemination of the work to the public as well as subsequent re-use and re-mixing. Nevertheless, independent filmmakers in their actual practices re-imagine the licences' application in cultural production models that often depart from CC ideals. Such unanticipated uses of the licences are the products of continuous experimentation and trial and error practices based on creators' actual needs, rather than lawyers' ideas of creators' needs. Processes of domestication (Lie & Sørensen, 1996) highlight the appropriation of artefacts in specific settings, through an integration process that involves both practical as well as symbolic work (Sørensen, 1996). Indeed we see how filmmakers, through their situated practices, attempt to make the licences fit to their evolving requirements, both as a practical solution for IP rights management in the digital environment and as a more or less successful means to promote openness, self-expression and participation.

This paper draws primarily on material from the first author's doctoral study. The fieldwork for the study lasted from June 2010 until November 2013. During this time 31 interviews were conducted with independent, low budget filmmakers. These were subsequently transcribed and coded. Using purposeful sampling, the most prominent actors in the OCF community were identified through the CC website and open culture related websites, weblogs and press releases. Through the referrals of these initial interviewees, additional participants were recruited that were identified as key players. This type of snowball sampling allows to efficiently track relevant players through the perspectives of the actors themselves, and thus helps clarify the population of interest by capturing a sample with sufficient depth and variety. Indeed, especially in the beginning of the fieldwork, CC licenced films were a relatively new approach to legal rights management in the filmmaking industry, although the numbers of filmmakers that use the licences have increased significantly in subsequent years.

There were three broad research questions guiding this study:

- (1) What are the perceptions of independent filmmakers: what understandings and meanings do they ascribe to (particular kinds of) CC licence; what factors motivate them to adopt (particular kinds of) CC licences?
- (2) What are the alternative models for cultural production: what practices and strategies do OCFs develop around their projects?
- (3) What problems and frictions stem from the use of CC licences: what are the conflicts, challenges and tensions that independent filmmakers have to navigate in seeking to develop a sustainable model for open cultural production?

Amongst the 31 research participants, 12 were directly involved in OCF projects, 8 were independent filmmakers that used CC licences for only certain assets of their films and 11 were independent filmmakers that, although not using CC licences, had a very informed picture and strongly held beliefs about their relevance to their work. As we explore in more detail below, it is notable that of the 31 projects discussed, 9 were documentary films and 14 were science fiction feature or short films.

While the primary data collection method was through semi-structured, face-to-face interviews, additional methods included the documentary review of online and offline documents and resources, as well as unstructured observation in settings such as open film festivals, remix cinema workshops and open culture groups' meetings and conferences. The interviews were loosely structured around key questions regarding the motivations for CC licence adoption; perceptions of the film industry and related legal and technological issues; short- and long-term strategies around OCF; and potential problems and limitations of open methodologies for filmmaking. This allowed considerable flexibility to follow up ideas and explore issues that interviewees regarded as more relevant to them. Parallel to the interviews, data were collected from online resources and documents such as: film industry reports, open content film project reviews, filmmakers weblog posts, media articles, the CC mailing lists, open content and filmmaking forums, and official websites of open film projects and platforms. Here we note that there is a very rich dialogue unfolding through online mailing lists, forums and blogs where independent filmmakers address questions regarding innovative strategies for film production and distribution, as well as issues related to open content creation methodologies. The ease of access and wealth of data that this research method provided was invaluable in contributing to promoting understanding of OCFs' practices and concerns.

The filmmakers interviewed were mainly from European countries (specifically Finland, France, Germany, Greece, Hungary, the Netherlands, Poland, Spain, Sweden and the UK). Though also including a US-based and an Australian filmmaker, we are mindful of potential bias from the mainly European focus of our sample. Table 1 provides information on the key research participants mentioned throughout this paper:

4. Making open content films

The developments we discuss build on a history of close interaction between technology and filmmaking. Since its birth in the 1890s, cinema and filmmaking have been characterised and evolved through on-going interaction between technology and art (Salt, 2009). The filmmaking industry has developed rapidly since then, in terms of technological, economic and social influence. More recent developments such as a drop in the cost of film production and distribution were enabled through the use of digital video technology. This has led to it being easier and less risky for small independent creators to experiment with various forms of filmmaking and build up their own distribution systems.

Table 1. Key research participants mentioned in this paper.

Name ^a	Interview date and location	Role	CC use
Anne H.	10/12/2012 London	Media archivist, Documentarian, Independent filmmaker	Frequent
Felix G.	12/11/2011 London	Independent filmmaker	Occasional
Gary W.	08/06/2012 London	Independent filmmaker	Never
Hugh H.	21/10/2010 Edinburgh	Machinimist, Independent filmmaker	Frequent
Jamie K.	12/06/2011 Berlin	Digital rights activist, Independent filmmaker	Frequent
Josef M.	02/02/2013 Edinburgh	Documentarian, Independent filmmaker	Occasional
Kayle N.	12/12/2011 Manchester	Independent filmmaker	Occasional
Matthias M.	06/02/2012 Stockholm	Digital rights activists, Independent filmmaker	Frequent
Paul T.	12/08/2012 Edinburgh	Independent filmmaker	Frequent

^aThe participants' personal information has been anonymised in accordance with their wishes.

Digital cameras, online networks and web-enabled strategies allow filmmakers to manoeuvre away from the tightly controlled structures of the established mainstream industry by offering alternative means for film production and distribution. Though alternative models of film production and distribution, separate from the mainstream, were already in place before the advent of digital technologies, they have been significantly amplified and facilitated through the use of digital technology infrastructures and tools. Informants describe with excitement how they learnt to adjust their strategies and alliances in order to integrate into this digital networked environment. They do this through experimentation and trial and error practices and also through interactions and information exchange with other actors who are in tune with this new information economy and 'digital native' communities like CC. Indeed, informants who embrace practices adjusted to the online environment regard the uptake of the licences as part of their digital arsenal, and CC licences are often viewed as the 'native' legal response for the management of their digital rights.

Nevertheless, their chosen path is also not without problems. As this research demonstrates, one of the OCFs' basic needs is to devise alternative methods to monetise their films and even more importantly to find their niche audience, garner its support and maintain a community that is sufficiently involved to support them in direct and indirect ways. The application of CC licences is meant to assist filmmakers during these processes. However, as we shall see, their applicability and success are dependent on the specific characteristics and goals of each film project, and perhaps more importantly on a clear understanding of the licences' advantages and limitations. It therefore follows that championing CC adoption without a careful consideration of each project's unique configuration of elements and goals, as well as a nuanced understanding of the legal issues involved, could actually create more complications than it is trying to resolve.

In this section we identify four main features of OCF: the adoption of CC as an element to support the building of communities of creation; the importance of an ideological vision in shaping OCF as well as more pragmatic use of CC; the prevalence of CC use by creators and consumers in particular genres of filmmaking and finally the role of CC in helping raise investment and generate income in the OCF. In the following section we deal more with the challenges and limitations of CC in OCF.

4.1. Building communities

Amongst the different types of creative content that have migrated to the digital online environment, filmmaking presents a special case as it requires the most diverse types of expertise (such as screenwriting, design, cinematography, editing, music, direction, acting and so on), but it also provides a great opportunity to nurture relationships and collaborations between different creative communities by taking advantage of digital technology affordances. Filmmaking had always been a collaborative process but, as interviewees highlight, online networks allow such collaborations to extend to geographically dispersed communities of creators who may work on the same project without ever having met each other face to face. CC licenced work can then, in some cases, become the catalyst for the initiation of such collaborations. Hugh is an Edinburgh-based filmmaker interested in innovative forms of cinematic storytelling. He describes how he regularly collaborates with people that he has only met online after becoming familiar with their work, again through its online availability:

I was looking for music that I could use in *Bloodspell* and I really did not have a budget for any of these, so I was looking online for CC licensed music and honestly there was an amazing range of options. So I contacted this songwriter, mostly as a courtesy, to let him know how I intended to use his music and he was actually very keen to even produce some original material just for the film. So yes, that was the beginning of a beautiful friendship [laughs]. (Hugh H., interview, 21/10/2010)

And when it comes to film distribution the influence of digital technology and online communities is even more pronounced. Hugh continues:

It was inconceivably harder to distribute your film than it was to produce it. Film distribution has a huge infrastructure in place and it requires huge sums of money to feed it. You need factories to make copies of films, you need vehicles to transport them around the world, you need warehouses and retail shops. And let's not forget all the secondary functions that are needed to keep this system running. People like accountants, agents, lawyers ... When the internet comes into the equation everything is turned on its head. Now a world-wide audience can be reached with the push of a button. (Hugh H., interview, 21/10/2010)

Participants make clear how they are willing to experiment with any tools in their disposal, in order to complete their projects and build their audiences. This is a sphere of activities where social, legal and technological tools blend seamlessly, though not always without frictions. Creators tweak the technological and legal tools they have at hand (*learning by doing*) and engage their online communities with similar options in order to refine their practices through extended *learning by interacting* (Sørensen, 1996) processes.

4.2. Ideological and pragmatic motivations

When it comes to the motivations and intentions of filmmakers for licencing their own films under CC, creators justify their choice by appealing to a variety of both practical and ideological concerns that they regard as relevant not only to their work, but also to the whole networked communication ecosystem that they rely upon to produce and distribute their films. Filmmakers can therefore regard open licencing implementation as the answer to practical problems during filmmaking; as a way to assert their ideological affinities and enact digital activism through their films; or as enabling and promoting experimentation with digital tools and innovative forms of filmmaking. The motivation to adopt CC licences stems from a combination of these diverse rationales, albeit in varying degrees and emphases between them, for each of the participants.

Participants judge the efficacy of licences sometimes in terms of how well they fare as an *alternative regulatory framework* for managing digital copyright and at other times on whether they sufficiently promote the ideals of the *open ethos* as it has been formulated by organisations such as the Electronic Frontiers Foundation and the Open Rights Group; and finally, on whether they enable and *facilitate a set of practices* such as collaborative innovation, cultural participation and sharing to occur and develop online and in some instances even offline.

Felix is an independent filmmaker based in London who uses CC licences for some of his short films. He explains:

What I really want, what is significant here is that people out there have a chance to see this film. I want it to reach the largest possible audience. CC is another way to make this intention explicit. A CC logo attached to the film, it's kind of a flag that says: 'there are no

complications here, no obstacles, just go for it. Access is open.’ This has tremendous value, what with all the confusion around what you can legally access online and what you shouldn’t. (Felix G., interview, 12/11/2011)

Aside from signifying a creator’s intentions of how the audience is to be engaged with an open film, use of the licences can be instrumental in planning a strategy for future remuneration. In such occasions, filmmakers use the licences mainly as a promotional tool and for specific works that they intended to offer freely. Hugh outlines his own perceptions and understandings of this type of CC use:

You can say that CC works very well for loss-leader type of films. You could get money from them but you probably won’t. That’s not the point. The licenses help to get your name out there. To build a fan community. (Hugh H., interview, 21/10/2010)

Some filmmakers under certain circumstances are primarily motivated by the desire to promote the open ethos online. They licence most, if not all, of their works under CC and find strong ideological affinities between the *Creative Commons* organisation’s rhetoric and their own viewpoints. In such occasions, the use of CC licences is regarded as a challenge to the established norms of copyright usage. They certainly also recognise the practical appeal of the licences, but for them what takes priority is the preservation of digital cultural environmentalism⁵. Matthias, a Stockholm-based independent filmmaker involved in OCF explains his reasons for CC adoption:

I came across some books by Lawrence Lessig. I’ve always been interested in the philosophy behind free software. So extending the same principles to our little world of filmmaking was too exciting to pass on ... And since for coders it has worked very, very well and I mean, even making profitable and better software then why shouldn’t it work for films? The Hollywood industry has been keeping us hostages for too long with increasing the terms of copyright and using DRM for their media ... It’s time to answer back for the things that matter to us. (Matthias M., interview, 6/02/2012)

CC is by now much more than just a licensing system or even a non-profit organisation. It lobbies for a more nuanced approach to copyright law, and utilises social movement dynamics. In this way it has become a symbol or a brand which carries specific though diverse cultural, economic and ideological connotations both for its supporters and its opponents. OCFs, indeed, ascribe multiple, sometimes even opposing, symbolic understandings to the application of the licences. Domestication therefore takes place through diverse narratives and situated practices that are shaped, often through tensions and conflicts, by creators’ endeavours to adjust the licences to either their practical needs or their ideological expectations. Set against these different contexts, we can trace the processes of social learning that unfold through creators’ choices and interactions in their attempts to domesticate the legal innovation that is CC.

4.3. Success by genres

Our participation in filmmaking related events suggested that the overwhelming majority of open content and web-oriented films gravitated around the two genres of *documentary* and *science fiction*. Observation of such events provided important opportunities to acquire a wider view of the OCF movement since they function as both networking opportunities and as spaces for exchanging ideas. The events we participated in included: 3rd Free Culture

Research Conference (Berlin, 8-9/10/2010), Remix Cinema Workshop (Oxford, 24-25/03/2011), ORGCon (London, 23-26/03/2012), ORGCon North (Manchester, 12-13/04/2013), BCCFF (Barcelona, 9-12/05/2013), NordicCCFF (Stockholm, 30/08-08/09/2013). Marked over-representation of documentaries and science fiction films is evident in the open content, digital film community (though many of these films depart from the established norms of these genres with regards to style and format). Paul, an OCF based in Edinburgh, comments:

That's geek culture isn't it? Films made for the internet audience and made with the help of the internet and digital technologies, by new technology enthusiasts, it's only natural that they'd deal with subjects that internet communities are fascinated with from the very beginning. (Paul T., interview, 12/08/2012)

Such concentration around these two genres possibly signifies something beyond the shared concerns of cyber-culture. Both documentaries and science fiction deal with subjects that certain segments of the audience can feel very strongly about. They can therefore be easily mobilised to promote and support such films. Thus the ease of gathering up a community around such projects may be one of the factors that galvanise the production of both science fiction and documentary films.

It appears that knowing your audience and acknowledging what type or format of media they want to consume and how is an essential preoccupation for web-oriented 'no-budget' filmmakers. Anne is a filmmaker based in London involved in both media archiving and filmmaking especially related to local communities. She describes the type of projects that she is involved in as:

... a hybrid genre. It borrows elements from documentary filmmaking, journalism, serialised TV. I'm not sure this description does it justice [laughs]. It basically allows people to share aspects of their lives, their local communities' lives, any issues they want to address ... All this genres that don't fall neatly in the pre-established categories struggle to find a durable business model that will sustain them in the future. And these struggles give birth to new ideas and experimentation with both genres and business models. (Anne H., interview, 10/12/2012)

In terms of actual practices, there can never be just one formula that fits all projects – neither in OCF and nor the mainstream industry. Each project traces its own trajectory after different trials, many of which may initially fail. As Hugh points out: 'What is important is to fail fast, and then try again' (Hugh H., interview, 21/10/2010). This draws attention to a key feature of the 'trial and error' experimentation surrounding these changes, as prefigured by the social learning perspective. *Learning by failing* (Williams et al., 2005) – whether failing to complete a project or failing to attract an audience – can offer valuable lessons for filmmakers' future innovative business practices since in the volatile new media landscape there are no foolproof ways to complete a creative project. Trial and error practices (Sørensen, 1996) and adaptability to new circumstances are therefore considered as key assets for OCFs.

4.4. Gaining revenues

Raising finance is a key challenge for all cultural producers and OCFs exemplify the struggles to secure revenues when access to conventional sources is not available. OCFs

explain how they use crowdfunding, sales of related merchandise and voluntary donations to financially support their activities, although they often admit that such strategies have varying degrees of success. These strategies, as the subsequent paper to this work shows in greater detail (Campagnolo et al., 2018), have also by now been adopted not only by the independent film industry but also by the mainstream industry, leading some OCF proponents to express concerns about co-optation. As Bennett, Chin, and Jones (2015) indicate, online financing strategies like crowdfunding can be a double-edged sword for creators, opening up new possibilities but also frequently concealing pitfalls. For OCFs, more specifically, such strategies may be effective for revenue generation on an ad hoc basis, but had not proved economically sustainable in the long term. Nor are they suitable for filmmakers who did not already possess or were not in a position to build a support community or a fan base that would contribute. As many interviewees assert, financial remuneration is not always a priority though for OCF projects that tend to adopt a loss-leader strategy, distributing their films freely but expecting revenues from other streams such as later licencing, or from selling more or less related products and services.

As an example of an attempt to articulate rules of practice around audience-based financing, OCF respondent Jamie, who is deeply involved in the digital rights movement, follows the formula of Mike Masnick, the editor of the technology-focused weblog Techdirt,⁶ for adjusting creators' business models to the digital era. Masnick tried to provide a simplification of the new business models that open culture creators develop by expressing it through this equation: 'Connect with Fans (CwF) + Reason to Buy (RtB) = The Business Model (\$\$\$)'.⁷ Jamie explains his views on how this formula works:

One of the things that I think it's important about what Mike is saying is this formula: connect with audience and give them reason to buy. And I think one of the amazing things that the internet managed to do is connect with audiences free or cheaply, very cheaply and get products to them very cheaply. I think that the tricky part is the reason to buy. (Jamie K., interview, 12/06/2011)

But while Jamie and other OCFs invest the most significant part of their activities and resources in figuring out how to give audiences a reason to buy, Jamie is also concerned that industry intermediaries are instead clinging to past business models whose main pre-occupation was to find out how much is the audience willing to pay for a cultural product and then value their products accordingly. Although it is debatable whether this is an accurate understanding of how the mainstream industry indeed operates, OCFs' strategies are often informed by rather similar conceptions. Jamie, therefore, seeks to reframe the pricing question in the following terms: 'For which sort of product or experience would the audience be willing to pay and how can I give it to them?' (Jamie K., interview, 12/06/2011).

From this perspective, OCF films become the freely distributed and mobile products from a creator's portfolio that provide exposure and attract attention to their *brand* and *expertise*, not only in filmmaking but also in other digital media related domains. OCF outputs, therefore, essentially provide a showcase of creators' skills, as well as a promotion for their innovative online platforms and services.

OCFs also contributed to broader innovations in such online platforms and services including the development of online distribution platforms, 3-D graphics engines, film production companies, crowdsourcing platforms and consultancy services for community building. OCFs appear to be more active in these type of practices compared to filmmakers

who do not use CC licences to freely distribute their films. Indeed out of the 19 participants that have used CC licences for their films, 13 were involved in such projects and most of them considered their freely available films operating as a form of advertisement or portfolio for the skills and creativity that were needed for their realisation.⁸ In contrast, out of the 12 independent filmmakers interviewed who were not using an open licence for their projects, just 4 were involved in launching an online service.

Drawing inspiration from the IT industry's innovation strategies and service-based business model (Leadbeater & Oakley, 2005), filmmakers often seek to promote their own services. We showed that this often took the form of film production, distribution and marketing platforms targeted either towards other filmmakers or towards audiences. Instead of witnessing the unfolding of disintermediation processes in the online environment – a notion that is prevalent in CC discourse and digital media analysis – we actually find that certain actors seek to build and promote their own virtual infrastructure and become themselves the new intermediaries of the digital environment by situating themselves in key positions within these novel online arrangements. The Social Learning framework alerts us to the complexities of such processes and underlines that we cannot anticipate how the users of the licences will engage with them, and what sort of choices, contingencies and complexities they will face in their attempt to domesticate them (Williams & Edge, 1996). So while the most fervent proponents of CC licences dismiss the importance of traditional intermediaries, filmmakers' actual practices generate a more complex innovation ecosystem where innovative digital strategies are combined, though not without tensions, with the established practices of the mainstream film industry and its traditional intermediaries.

5. Limitations and struggles in OCF

After recounting the strategies and organisational configurations around the implementation of CC licences in independent film projects, we turn our attention to the frictions, conflicts and problems within OCF. Filmmakers' understandings of the current situation for cultural creation in the networked, digital media may start from similar viewpoints, stressing the importance of experimenting and innovating with technology and a general dissatisfaction with the mainstream industry and its traditional gatekeepers. But they nevertheless, often come to different conclusions with regards to how this situation could be improved, how they would best achieve the implementation of sustainable business strategies and what is the role of the different CC licences throughout this whole process.

Copyright licence proliferation is often described in the literature (Dulong De Rosnay, 2006) as a factor contributing to further confusion around digital copyright, resulting in cultural resources that are incompatible and cannot form a *digital commons* that other actors can draw upon. Felix points out how the different modalities of CC licences, which are meant to offer extra flexibility to creators by allowing them to calibrate the level of control they have over their works, also require a much more advanced understanding of IP issues in filmmaking than was customary until recently.

Saying that a film is licensed under CC does not actually mean anything. You have to explicitly mention the specific type of license, otherwise people will not know what they can do

with this work. And that's even worse than copyright, isn't it? I mean, copyright is super restrictive, sure enough but in that sense it's clear. It warns people that they need to stay away, they can't re-use, modify, distribute, nothing. But when they say 'my film is licensed under CC', I reply 'And so what? What can I do with it? What are you saying that I'm allowed to do with it?' I mean they have to specifically mention the exact type of license, otherwise nobody would dare touch something like that and risk being sued. (Felix G., interview, 12/11/2011)

What is more, not all CC licences are free licences. When the NC or ND clauses are included in the licence then the works that use them are not typically considered as essentially free or even open⁹, although they are still regarded by some creators and the CC community as adopting a more open legal strategy compared to the 'all-rights-reserved' of traditional copyright.

The NC option, allowing NC use only, is one of the most controversial features of the CC licences (Elkin-Koren, 2005). The main but not only reason for the controversy is the multiplicity of possible definitions of a commercial use. NC designated material leaves considerable ambiguity as to under which circumstances someone would be allowed to re-use it. On the CC website the definition of a commercial use is as 'one primarily intended for commercial advantage or monetary compensation'.¹⁰ The stated purpose of this rather vague definition is a concern not to place detailed restrictions that would limit the uses of a CC licenced resource. But this approach also leaves room for confusions and misinterpretations, given that the use of an NC licenced work depends 'on the specifics of the situation and the intentions of the user'.¹¹

Gary – a filmmaker based in London who has been involved with independent filmmaking for the past six years – points out how the inclusion of the NC clause could halt the further distribution of the licenced work:

I would think twice before using any material that carries the NC clause. Even if I just wanted to re-post something on my blog or my Facebook page. I mean, where does NC stops and commercial begins? I've made advertising space available on my blog, like most people who use any sort of social media. Would that be commercial use? Maybe not, but I wouldn't risk the legal trouble. (Gary W., interview, 8/06/2012)

Gary stresses that, especially when it comes to NC licenced films, anything other than simply watching it in the privacy of one's own home could run the risk of licence violation.

Kayle, a Manchester-based independent filmmaker, also expresses concerns about his distribution strategy and the commercial viability of his OCF project. He chose to licence his latest animated film project under an Attribution-NonCommercial-ShareAlike (BY-NC-SA) CC licence. The reason for using an NC licence was so that he would retain the possibility of additional distribution deals through a mainstream industry intermediary. However, he is now uncertain whether this was a sound decision after all:

I am not sure at all if this is ever going to happen. It was hard enough to strike a deal when I could offer them exclusive rights. Who will be interested in a work that circulates freely online? They'll think it's impossible to make money out of it. But it's still better to have a NC license, at least it leaves some windows open, there are more possibilities. (Kayle N., interview, 12/12/2011)

Such concerns relate to the general uncertainty that independent filmmakers have to deal with when searching for commercial distributors regardless of the type of copyright

restrictions that they apply to their work. In the case of OCFs their choice is essentially a compromise between increased visibility and also increased uncertainty because of the free circulation of their films online.

When the ND clause is included in the CC licences, it means that the creator does not allow for any modifications or adaptations to be created based on the original work. Such licences allow for re-distribution but only as long as the original work remains unchanged; it has to be redistributed in its entirety. So while the right to tinker with software is well defined as one of the basic freedoms for free software, when we move to cultural works, the moral right of artistic integrity becomes more relevant, at least to some creators. Josef is a documentarian using different copyright statuses (from open licences to all-rights-reserved) for different projects. He explains why the specific licence formula that works for free software, may not necessarily work for films:

Software serve a practical purpose for users, films are more tied to the creator's vision and aesthetics. So we appreciate software because they allow us to do something else, but we appreciate films for their own essential value. (Josef M., interview, 2/02/2013)

One of the major issues of clashing understandings that fragment the OCF movement is around the significance and interpretation of openness in CC licenced films. The CC organisation is part of a much larger movement promoting less restrictive digital copyright protection. Often referred to as the 'digital rights movement', this movement brings together diverse organisations, advocacy networks, activists and political parties. Many of these actors even within the same organisation have very differing views on how to promote openness and related practices online. Accordingly, within the OCF movement, it is often debated whether certain elements of the CC licences, especially the NC and ND clauses, can either contribute to or inhibit different practices, which creates ideological and pragmatic frictions. Some filmmakers, therefore, emphasise that films which are licenced under the more restrictive CC licences do not involve any kind of collaborative production and do not allow derivative works to be made, so there is no kind of co-production or 'remix culture' – the flagship concept of CC licencing promoters – happening here. What is more, many such projects often also reserve commercial rights for mainstream distributors. The more ideologically motivated interviewees express the opinion that such projects free-ride on the dynamics of the open culture movement; while others who are motivated towards CC licence adoption for more pragmatic reasons, point to the need to make compromises in order to develop sustainable business practices during this turbulent period of rapid technological transitions, filled with as many opportunities as pitfalls.

Social Learning and related analyses suggest that the affordances and limitations of innovation should not be taken for granted, as they truly only become apparent through their practical application in the users' day-to-day practices and after continuous interaction through various environments. Insights based on the actual, situated everyday practices of filmmakers and the patterns that emerge from such practices can point to the type of organisational and infrastructural changes that will be needed to support creativity within the digital domain. It is evident that the current institutional structures that support filmmaking (and other creative industries), face serious re-arrangements and challenges within the digital environment, so there is a need for legal and organisational change. Innovative business strategies and sustainable digital practices develop gradually through

the interaction of digital and traditional (i.e., based on physical storage media) models of creation and monetisation and through the combination of open licences with more restrictive ones or even on occasion, with retaining full copyright. We, therefore, need to attend to the fact that the struggles and conflicts about the shape of the digital content industries are not about the dominance of one type of organisational model instead of another, but about allowing and promoting the co-existence of different models and at different levels or for different markets.

6. Discussion and conclusions

Applying insights from the Social Learning perspective (Sørensen, 1996), we follow the circulation of meaning around open content licencing in filmmaking through the situated practices of the creators themselves. Filmmakers' motives for CC licence adoption are as much dependent on their understandings of what openness means in the digital environment, as it is on the more practical considerations regarding the smooth production and distribution of their films. Since films are much more complex and consistent artistic artefacts than software, their end goals and connotations of openness are accordingly shaped differently. Filmmakers need to figure out for themselves – by 'learning by doing' through their everyday practices and by wider engagements (learning by interacting [Sørensen, 1996]) – what openness means to them and how it can be applied to their films. We have highlighted the social learning processes whereby creators, seeking to explore the relevance of CC licences, struggled to establish the utility and appropriateness of the different kinds of CC licences for their purposes and contexts. They needed to 'domesticate' these tools – to bring them in from the wild – and through trial and error, tinkering, sensemaking and the development of routines 'to make artefacts work and to make sense' (Sørensen, 1996, p. 11). However, their processes of discovery and the conclusions they draw from it varied widely depending on the filmmaker's background, motivations and goals as well as the various contingencies that each project faces. Through the multiplicity of their experiences and understandings, filmmakers managed to find suitable ways of integrating openness to their work, although often in a rather partial and fragmented way.

OCFs assert that removing the pay-wall between their films and the audience is the fastest way towards user adoption of their brand. They claim that they have come to the realisation that it is potentially easier to make money by allowing access and re-use than by trying to stop it, but this requires them to optimise their business strategies in such a way that sharing their content works for them, not against them. While allowing free access or even modification of their films is not a lucrative or sustainable endeavour in itself, when managed properly, it becomes the catalyst for recognition of profitable ventures. Such ventures or initiatives include: the promotion of virtual infrastructure, most commonly taking the form of film production and distribution platforms; benefits deriving from building a strong community willing to support the filmmakers through crowdsourcing and crowdfunding; collecting user information as a means of market research; relying on the selling of products with added value like film-related merchandise or High Definition DVDs; or capitalising on the experience of OCF through consultancy, advocacy and paid speaking gigs. The subsequent paper (Authors, submitted paper) arising from this work explores in more detail how these strategies developed further with the selective integration of OCF elements into more mainstream film industry practices.

On the other hand, OCFs diverge widely in their perceptions of what constitutes an open film project, a factor leading to the fragmentation of the OCF movement. What is more, collaborative peer production, which was hailed as the process underlying the transformative powers of networked technologies, is not often an objective in open film projects as most of them opt for a 'Non-Derivative' version of CC licences. But even where remixes and derivative work are encouraged, audiences do not appear to be sufficiently motivated to get involved and become peer producers of content in the way that the relevant media studies literature seems to suggest. Open access practices are not as radically participatory, egalitarian or as efficient as CC proponents claim them to be; they do not necessarily challenge established modes of proprietary cultural production nor do they represent a break from the past. Instead, they are rather complementary and serve as an extension of previous forms of economic and creative organisation. It appears that CC advocates call for openness without examining the processes by which collaborative and open activities come together with commercial and proprietary approaches within and beyond the digital environment.

IP and its enforcement within the new digital environment require new types of regulations since they have different socio-technical characteristics to those of its predecessors. *Learning by regulating* (Sørensen, 1996) refers attempts by innovation and policy communities to establish mechanisms of influence suited for the development and application of new technologies. In the case of the CC licencing suite, an attempt to resolve these newly emerged issues is taken up by private actors through the development of an alternative licencing system which is claimed to be better suited to promote innovation in the new information economy; and by trying to enrol supporters and users in their visions and products. CC is therefore a clear example of how private players, in promoting their visions of technology, seek to establish their offerings at the heart of technology regimes (Sørensen, 1996; Williams et al., 2005) and can be regarded as a tool in learning how to domesticate digital media through regulation. We can distinguish between different levels of social learning around this legal innovation. Within the broader field of digital media, CC is used instrumentally to minimise friction and facilitate the smooth running and interoperability of multimedia, it is therefore used as a fix that facilitates social learning in digital media. On a more specific and focused level, in order for CC licences to actually work successfully and achieve their stated purposes, they need to be experimented with, re-imagined and domesticated within specific local settings. This further entails processes of negotiation and potential conflict between actors with differing agendas, commitments and resources. In a multidimensional process of social learning and depending on the perspective one takes, the licences are both a tool of learning by regulating and the field where social learning around legal innovation takes place.

Empirical, qualitative research is urgently needed on all aspects of the wide and contentious debate about how to manage creativity and cultural production in the digital environment. Within this terrain, copyright law merges and clashes with open licencing strategies, as mainstream film industry practices come into contact and engage with networked peer production and open distribution of films. OCFs navigate this terrain as they draw upon ideas inspired by CC discourse on how open systems produce better results than closed ones. Consequently, instead of extending the value system of artificial scarcity that they feel the mainstream film industry has imposed on its cultural products, OCFs experiment and tinker with configurations that embrace the abundant availability of

digital resources. CC proponents advocate that opting for openness is not simply the morally right thing to do, but also the most effective in practical terms since creativity and innovation are best served by an abundance of information and the wide distribution and availability of cultural resources, in contrast to traditional film practices geared towards expropriating rare, dramatic commercial successes on an individual project basis. Such views however, may sometimes ignore that the increased availability of information has complex consequences (Kallinikos, 2006) and its unfolding dynamics shape in often-unpredictable ways both the established industry and novel, networked models of cultural production (Brown & Duguid, 2000). Our subsequent paper explores the further evolution of these models and the different practices and understandings emerging over time that – matters became visible through extending the scope and timeframe of our enquiry.

Indeed, there is a great diversity and heterogeneity of actors involved in open cultural projects and these actors offer varied articulations and interpretations of the usefulness of both copyright and open licencing systems. As our subsequent paper will demonstrate in more detail, the landscape of digital cultural production that is revealed is comprised of both mainstream cultural industry practices and hybrid, networked forms of organisation. The tense but innovative combination of open cultural production practices with mainstream, established routes, alerts us to the need for strategies/policies for openness to allow room for combinations of both open and all-rights-reserved elements rather than simply advocating the implementation of ‘purist’ open licencing strategies.

Notes

1. The Free Software Foundation explains the four essential freedoms the distribution of software must adhere to, for the FSF to consider it ‘free software’. More details at: <http://www.gnu.org/philosophy/free-sw.en.html>
2. The *Creative Commons* organisation aims to offer a more flexible framework for creators to both protect and share their work online. The CC licenses suite that they offer, consists of four main elements: attribution (BY), sharealike (SA), non-commercial (NC), non-derivative (ND). Depending on which choices creators make regarding the commercial use, alteration and future reproduction and licencing of their work, these four basic clauses lead to one of six CC licenses which vary in terms of the level of restrictions from most open: CC BY, to most restrictive: CC BY-NC-ND.
3. The GNU General Public License is one of the most popular free software licenses originally written by Richard Stallman of The Free Software Foundation.
4. <https://creativecommons.org/about/mission-and-vision/> sampled 24 March 2017
5. *Cultural Environmentalism* is a term coined by James Boyle, professor of law and one of the original co-founders of *Creative Commons*. It refers to a set of practises meant to promote openness, the enrichment of the public domain and the loosening of digital copyright restriction. Boyle argues that such actions serve a similar goal to that of environmentalists’ actions.
6. <https://www.techdirt.com/> sampled 1 Sept 2016.
7. <https://www.techdirt.com/articles/20090201/1408273588.shtml> last sampled 21 March 2018.
8. This has some parallels with the hybrid business models whereby Open Source Software firms like Red Hat exploit reputational and other advantages to pursue related commercial opportunities (NESTA, 2015).
9. The case for free use: reasons not to use a CC – NC license <http://freedomdefined.org/Licenses/NC> sampled 31 April 2017.
10. https://wiki.creativecommons.org/Frequently_Asked_Questions#Does_my_use_violate_the_NonCommercial_clause_of_the_licenses.3F sampled 15 June 2016.
11. *ibid*

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Notes on contributors

Evi Giannatou is a social researcher interested in the interaction between legal innovation and ICTs and the possibilities it generates for innovative social and economic practises. Her doctoral thesis focused on independent filmmakers' use of Creative Commons licences. Evi received her doctorate degree in Science and Technology Studies from the University of Edinburgh. [email: evigiannatou@yahoo.gr]

Gian Marco Campagnolo is Lecturer in Science & Technology Studies and Turing Inaugural Fellow at the University of Edinburgh. His research empirically focuses on ICT markets with a focus on the relationship between technology and expertise. He has been visiting research fellow at Ecole des Mines in Paris and post-doctoral fellow at University of Trento (Italy), where he has also been consultant for the government's digital agenda. [email: G.Campagnolo@ed.ac.uk]

Michael Franklin's doctoral research at the Institute for Capitalising on Creativity, The University of St Andrews focused on the performative role of digital engagement metrics as calculative tools in market boundaries. His current work (at the Institute for Creative and Cultural Entrepreneurship, Goldsmiths College, University of London) examines market devices in the context of risk perception and management in creative industries. [email: m.franklin@gold.ac.uk]

James Stewart is Lecturer in Science & Technology Studies at the University of Edinburgh and research fellow Edinburgh in the Institute for Science, Technology and Innovation. His interdisciplinary research explores the development of new technologies and the way that they are shaped, appropriated and become part of large scale systems of technology and culture. [email: J.K.Stewart@ed.ac.uk]

Robin Williams is Professor of Social Research on Technology in the School of Social and Political Sciences and Director of the Institute for the Study of Science, Technology and Innovation (ISSTI) at The University of Edinburgh. Building on research into the 'social shaping' of enterprise systems, his current work applies the Biography of Artefacts perspective to address the design and implementation of information infrastructures. [email: R.Williams@ed.ac.uk]

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